Claims

1. A method of proxying or relaying a message to an application server (10, 40, 60) said method comprising the steps of:

   a) receiving said message;

   b) forwarding towards said application server (10, 40, 60) a processing information indicating at least one allowable operating mode for processing said message; and

   c) processing said message based on a selected one of said at least one allowable operating mode.

2. A method according to claim 1, wherein said forwarding step is performed by adding to said message at least one header field or sub-field of a header field, indicating said allowable operating modes.

3. A method according to claim 1, wherein said forwarding step is performed by adding to said message a first route header pointing to said application server and a second route header pointing back to the proxying or relaying network element (20).

4. A method according to claim 3, further comprising the step of adding to said second route header a header extension field indicating that said second route header is to be ignored if said application server (10, 40, 60) is operated in a user agent server mode.

5. A method according to claim 1, wherein said forwarding step is performed by adding to said message only one route header pointing to said application server (10, 40, 60).

6. A method according to claim 1, wherein said forwarding step is performed by adding said processing information to a body or payload portion of said message.

7.   A method according to any one of the preceding claims, wherein said message is a service request.

5   8.   A method according to claim 2, wherein said header field is an extension header field.

9.   A method according to claim 1, wherein said forwarding step is performed using a mode negotiation function.

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10.   A method according to claim 9, wherein said mode negotiation function is performed by adding to a SIP Options message a header field indicating said allowable operating modes.

15   11.   A method according to claim 9 or 10, wherein said mode negotiation is performed during a registration to said application server (10, 40, 60).

12.   A method according to anyone of the preceding claims, further comprising the step of checking the possibility of said forwarding step by adding a corresponding requirement information to said message.

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13.   A method according to claim 12, wherein said requirement information is a predetermined tag in a Proxy-Require header field of said message.

25   14.   A method according to claim 7, wherein said service request is a SIP request.

15.   A method according to claim 1, wherein said processing information is added to a filter information.

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16.   A method according to anyone of the preceding claims, wherein said allowable operating modes comprise at least one of a proxy server mode, a

back-to-back user agent mode, a user agent server mode and a user agent client mode.

17. A system for proxying or relaying a message to an application server (10, 40, 60), said system comprising:

a) session control means (20) for receiving said message and for generating and forwarding towards said application server (10, 40, 60) a processing information indicating at least one allowable operating mode for processing said message;

b) wherein said application server is arranged to process said message based on a selected one of said at least one allowable operating modes.

18. A system according to claim 17, wherein said session control means is a Call State Control Function (20) of an IP multimedia subsystem.

19. A system according to claim 17 or 18, wherein said application server is a SIP application server (10, 40, 60).

20. A network element for proxying or relaying a message to an application server (10, 40, 60) said network element (20) being arranged to generate and forward towards said application server (10, 40, 60) a processing information indicating at least one allowable operating mode for processing said message.

21. A network element according to claim 20, wherein said network element (20) is arranged to forward said processing information in a payload or body portion, a header field or a sub-field of a header field of said message.

22. A network element according to claim 20, wherein said network element (20) is arranged to forward said processing information in a mode negotiation procedure.

23. A network element according to anyone of claims 20 to 22, wherein said network element (20) is arranged to add a predetermined tag to a proxy requirement header of said message to check the availability of said forwarding function.

24. A network element according to anyone of claims 20 to 23, wherein said network element is a Call State Control Function (20) of an IP multimedia subsystem.

25. An application server for receiving a message proxied or relayed from a network element (20), said application server (10, 40, 60) being arranged to process said message based on a processing information received from said network element and indicating at least one allowable operating mode for said processing.

26. An application server according to claim 25, wherein said application server (10, 40, 60) is arranged to determine said processing information from a header field of said message.

27. An application server according to claim 25, wherein said application server (10, 40, 60) is arranged to determine said processing information based on a mode negotiation function.